

Student–school bonding and adolescent problem behavior

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Abstract

Adolescent problem behavior, including substance use, school misconduct and delinquency, is a national concern. Implicit in the concept of middle school is the recognition that students who develop positive social bonds with their school are more likely to perform well academically, and refrain from misconduct and other antisocial behavior. However, little scientific attention has been given to the complex interactions between middle school students and the school environment. Prior to implementing a middle school problem behavior prevention program we conducted a survey in the seven middle schools in one US school district. Out of 4668 grade 6–8 students enrolled, 4263 (91.3%) completed the survey. Student–school bonding was positively correlated with school adjustment ($r = 0.49$) and perceived school climate ($r = 0.77$), but inversely correlated with problem behavior ($r = -0.39$ to -0.43). Problem behavior was significantly higher ($P < 0.001$) among males than females and among students in higher grades. Conversely, school bonding, climate and adjustment were significantly higher ($P < 0.001$) among females than males, but declined significantly from one grade to the next. The data support the conclusion that school bonding is associated with problem behavior. We describe

the development of a multiple-component intervention in middle schools designed to increase student–school bonding and prevent problem behavior.

Introduction

The dramatic increase in the prevalence of problem behaviors during adolescence is a national concern (Dryfoos, 1990; Feldman and Elliot, 1990; USDHHS, 1991). By grade 8, 31.5% use alcohol and 26.2% smoke cigarettes monthly, 44.2% have been in a physical fight in the past year, and truancy, bullying, theft and vandalism are common (USDHHS, 1989; CDC, 1990; Dryfoos, 1990; Johnston *et al.*, 1994). While low-income, minority youth (Lorion *et al.*, 1991) and those who experience family dissolution and transience (Furstenburg, 1991) are at greatest risk, a large proportion of adolescents eventually engage in some form of problem behavior, placing them at increased risk for school failure, involvement in the criminal justice system and health problems (Dryfoos, 1990; McCord, 1990).

Problem behaviors are of particular concern in middle school, where a contagious youth culture of academic negativism and misconduct can thwart learning and disrupt the school routine. Many early adolescents, engaged in an intense period of development known as the adolescent transition, are poorly prepared for secondary school and highly susceptible to antisocial influences (Carnegie Council on Adolescent Development, 1989). However, there is theoretical and empirical evidence that changes in the way middle grade schooling is conducted can promote academic

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achievement, improve school conduct and mediate the initiation of problem behavior (Hawkins and Weis, 1985; Kumpfer and Turner, 1991).

Middle school was conceived of as an innovative means of easing the transition of early adolescents to secondary education by providing a social and academic environment that is appropriate to the developmental level of early adolescents. Middle schools so developed compete for students' affiliation. Theoretically, well adjusted students who develop a positive affiliation, or social bond, with their school are more likely to remain academically engaged, and less likely to become involved in school misconduct and other antisocial behaviors, than students who develop a negative affiliation with school (Hawkins and Weis, 1985). While social bonding is not the only mediator of problem behavior, student-school bonding can protect students from the loss of academic ambition and the propensity for misconduct.

In this paper we discuss student-school bonding as it applies to middle school and problem behavior prevention, present the findings from a survey of middle school students on school bonding, school adjustment and problem behavior, and describe the development of *Going Places*, a primary prevention program designed to prevent problem behavior by increasing school bonding among middle school students.

Background

Problem behavior

Adolescent problem behaviors are associated with a host of negative health and social outcomes, including school failure, arrest, addiction, sexually transmitted diseases, pregnancy, injury and death (Jessor and Jessor, 1977; Feldman and Elliott, 1990; Dryfoos, 1990). The prevalence of problem behaviors is relatively rare prior to middle school, but increases dramatically during adolescence. For example, less than 10% of sixth graders have used tobacco, but about 30% of eighth graders and 60% of 11th graders have. While only 5% of sixth graders have used alcohol, nearly 70% of eighth

graders have (Johnston *et al.*, 1994). Further, delinquency increases 10-fold from age 10 to 14 (Dryfoos, 1990) and experience with sexual intercourse increases from almost zero among preadolescents to 61.6% of ninth graders (CDC, 1995). These increases in prevalence occur among both males and females in all socioeconomic groups (Dryfoos, 1990; Johnston *et al.*, 1994).

Problem behaviors tend to cluster (Jessor 1984; Lorion *et al.*, 1991), the presence of one increasing the likelihood of another. Also, problem behaviors tend to have common psychosocial mediators (Jessor and Jessor, 1977; Jessor, 1984; Perry and Jessor, 1984). Poor social skills, perceptions of low social competence, academic underachievement, negative attitudes toward school and lack of parental guidance have been identified as modifiable risk factors for problem behavior (Hawkins and Weis, 1985; Dryfoos, 1990; Steinberg, 1990; Schinke *et al.*, 1991). Elevated and unrealistic expectations about the benefits, prevalence and social acceptance of problem behaviors also place youth at risk for engaging in these behaviors (Hansen and Graham, 1991). Conversely, a perceived social norm that is conservative, in the sense that it is consistent with the actual, relatively low level of prevalence among adolescents, is protective against problem behavior. Peer affiliation can be a risk or protective factor because adolescents tend to behave in ways that are consistent with the behavior of their friends (Jessor and Jessor, 1977; Kandel *et al.*, 1986). Adolescents whose parents are demanding, involved and supportive are at lower risk of engaging in problem behavior than adolescents whose parents are uninvolved and unsupportive (Baumrind, 1991; Steinberg, 1990).

The transitions to middle school and then to high school are particularly difficult for students who are academically or socially deficient (Entwisle, 1990; Seidman *et al.*, 1994). The transition to middle school is notably difficult for students who fail to make friends with well-behaved children, lack the organizational and study skills required to keep up with assignments, and do not become involved in academic and co-

curricular school activities. To protect themselves from feelings of failure and incompetence, students may become apathetic or develop anti-social attitudes and behavior. Often the school is the target of discontented students, who rebel against school rules, ignore academics, treat teachers and other students with disrespect, and vandalize school property and facilities.

The adolescent transition and middle school

Adolescence is typified by dramatic physical, cognitive and psychosocial maturation that varies widely in timing and tempo (Brooks-Gunn *et al.*, 1985; Feldman and Elliott, 1990). Cognitively, adolescents' abilities to deal with relative, abstract and social concepts gradually advances. Socially, the quality of relationships between early adolescents and their peers and adults becomes increasingly important in middle school. Psychosocially, adolescents continue to deal with the life-long issues of achievement and competence, while identity, autonomy, intimacy, sexuality and social status emerge as other dominant concerns (Steinberg, 1990; Steinberg, 1993). Clearly, educating early adolescents is a complex task, which can be all the more difficult when students dislike school.

Aside from school, few institutions and social programs are substantially devoted to adolescents. Participation in youth sports and recreation programs, for example, declines dramatically after elementary school (Smith, 1991; Seefeldt *et al.*, 1993), and few supervised after-school programs are available for this age group (Carnegie Council on Adolescent Development, 1992). Hence, the school is the primary institution outside the family within which the development of adolescents can be directed and shaped. Within this context, adolescent problem behavior can be seen in part as the failure of schools to capture students' sense of social affiliation and provide educational experiences and a social context within which adolescents can develop social competence (Harter, 1982) and experience success (Bandura, 1986). Youth who get off to a bad start in middle school are at risk

for subsequent academic underachievement and problem behavior (Hawkins and Weis, 1985; Carnegie Council on Adolescent Development, 1989).

Middle school usually includes grades 6, 7 and 8, when most students are early adolescents, 10–14 years old. A product of the progressive education movement of the 1960s, middle schools were conceptualized to serve the unique academic and social needs of early adolescents, providing a transition between the relatively safe and academically flexible environment of elementary school and the relatively competitive, rigid and impersonal environment of high school (Carnegie Council on Adolescent Development, 1989).

In practice many middle schools differ little from the junior high schools they replaced (Carnegie Council on Adolescent Development, 1989; Magendollar, 1993; Wigfield and Eccles, 1994a). Relative to junior high schools, middle schools ideally have fewer students and are smaller overall. The curriculum is less hierarchical (e.g. grade 6, 7 and 8 math) and less departmentalized (e.g. math, English, science, social studies). Each grade is treated as a separate group or team. Student and staff team members have frequent opportunities to interact with and get to know each other in class and participate in co-curricular activities. Students in each grade are mostly separated from the students in the other grades to prevent bullying and to insulate grade-level norms. Tracking by academic ability is discouraged, while grading is flexible and individualized. The pedagogy favors problem solving, critical thinking, and interactive teaching methods within integrated and interdisciplinary curricula.

Theoretically, these middle school innovations would facilitate students' adjustment to school, enabling them to become involved in academic and co-curricular school activities, increasing motivation for learning, and decreasing motivation for misconduct and other anti-social behavior. Because underachievement and misconduct are two of the most important concerns of teachers and administrators, there is great interest in the

concept and methods of increasing student-school bonding.

School bonding and problem behavior

Adolescents who form a positive affiliation or social bond with their school are more likely than adolescents who fail to establish this social bond to engage in a variety of prosocial behaviors and achieve up to their potential academically, and less likely to engage in problem behaviors such as fighting, bullying, truancy, vandalism and substance use.

The concept of social bonding arose from social control theory, which suggests that attachment to family and school, commitment to conventional pathways of achievement and beliefs in the legitimacy of societal order are primary elements of establishing a social bond (Hirschi, 1969). The theory and some empirical data suggest that social bonding is protective against anti-social behavior (Hawkins and Weis, 1985; Kumpfer and Turner, 1991; McBride *et al.*, 1995). Similarly, bonding to the school, conceptualized by Hawkins and Weis (1985), includes attachment to prosocial peers, commitment to conventional academic and social activities at school, and belief in the established norms for school behavior.

Student-school bonding can be advanced by developing social skills and social competence, improving school climate, and encouraging authoritative parenting practices (Perry and Jessor, 1984; Hawkins and Catalano, 1990; Schaps and Battistich, 1991).

Social skills training

Middle school students have an acute need to demonstrate competence and be recognized for achievement (Steinberg, 1993; Wigfield and Eccles, 1994b). Those who feel blocked from academic achievement may be tempted to quit trying, misbehave or seek other anti-social avenues of achievement and recognition. If students do not develop the social skills they need to compete academically and do not have other opportunities for demonstrating achievement and competence within the school setting, they may develop antisocial attitudes and

behavior (Hawkins and Weis, 1985; Steinberg, 1990). Conversely, students who are committed to school are less likely to engage in anti-social behavior than students who are uninvolved, alienated or hostile toward school (Elliot *et al.*, 1985; Gottfredson, 1986; Schaps and Battistich, 1991; Kumpfer and Turner, 1991). Social skills curricula can improve self management and self control skills, thereby improving school adjustment and performance (Hawkins and Weis, 1985; Schaps and Battistich, 1991).

School climate

School climate has an important influence on school bonding (Pyper *et al.*, 1987). Students are motivated by an *authoritative teaching* style that is demanding, supportive and fair (Hawkins *et al.*, 1988; Schaps and Battistich, 1991; Olweus, 1993). Students who like their classes, believe their teachers are supportive and fair, have good peer relations, and accept their school's mission, values and standards are more likely to bond to the school. Student-school bonding may be improved by defining in positive ways the culture and personality of the school, establishing school policies and practices that are relevant and fair, and increasing opportunities for students to participate in school activities (Gottfredson, 1986). Participation in academic and co-curricular activities increases bonding because students are reinforced by their own success experiences and enjoy the opportunity to affiliate with peers and teachers who share their interests (Hawkins and Weis, 1985).

Parent education

Children are likely to place a value on their academic and behavioral performance at school that is equal to the interest and concern demonstrated by their parents (Steinberg, 1993; Paulson, 1994). Parents can be encouraged to establish high expectations, become highly involved in their children's school life, and support academic achievement and school participation (Baumrind, 1991; Dornbusch, 1994).

Methods

In preparation for the implementation of a middle school problem behavior prevention program we conducted a survey of consenting students in grades 6, 7 and 8 in all seven middle schools in a suburban Maryland school district. Parental consent was obtained through passive procedures (Severson and Biglan, 1989). Special education students with reading difficulties were excluded. Two trained proctors administered the survey in each class of 20–35 students. To emphasize confidentiality, students first completed and turned in a cover page that included their name, survey identification number, birth date and homeroom teacher's name. Thus, the students' names were not on the questionnaires. The study was approved by the Institutional Review Board of the NICHD and authorized representatives of the school district.

Measures

We developed an index of problem behavior that included eight items measuring the frequency during the last 12 months of smoking, drinking, other substance use, bullying, fighting, stealing, vandalism and weapons carrying. An index assessing school bonding included 6 items assessing students commitment to school. Perceived school climate was assessed by a 15-item index adapted from Pypers and colleagues (1987). An index assessing school adjustment included 11 items regarding students' perceptions about how well they do on school work, making friends at school, staying out of trouble, and getting along with students and teachers.

Analysis

We examined correlations between the variables of interest, and assessed grade and gender differences in the mean scores for each variable using ANOVA and *t*-tests.

Findings

A total of 4263 students out of 4668 (91.3%) completed the survey. The parents of 302 students

refused participation, 103 students were absent at the time of the survey and make up, and 417 special education students with reading problems were excluded.

Shown in Table I are the α coefficients for each variable and the correlations among variables. The internal consistency coefficients ranged from $\alpha = 0.76$ for school climate to $\alpha = 0.87$ for school adjustment. School bonding, school adjustment and perceived school climate were positively correlated with each other but inversely correlated with problem behavior.

Shown in Table II, school bonding, school climate and school adjustment were significantly higher ($P < 0.001$) among females than males, and higher among sixth graders than seventh or eighth graders, and higher among seventh graders than eighth graders. Conversely, problem behavior was significantly higher ($P < 0.0001$) among males than females, and higher among eighth graders than sixth or seventh graders, and seventh graders than sixth graders.

Discussion

The findings indicated that while school bonding, perceived school climate and school adjustment were positively associated, each of these variables was negatively associated with problem behavior. The findings are consistent with the hypothesis that positive attitudes toward school may be protective against problem behavior. The inverse relationship between school variables and problem behavior underscores the potential importance of student-school bonding.

We also found that problem behavior was higher among males than females and among students in higher grades, which is consistent with other findings (CDC, 1990; Dryfoos, 1990; Johnston *et al.*, 1994). Students in higher grades in our sample, rather than developing more positive attitudes toward school over time, actually liked school less, perceived school climate less favorably, felt less closely affiliated with school and were less well adjusted to school than students in lower grades. These findings suggest that creating middle schools

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Table I. Correlations among school bonding, school adjustment and multiple problem behavior

Variables (no. of items)	Coefficient α	School bonding	School climate	School adjustment
School bonding (6)	0.79	1.00	—	—
School climate (15)	0.76	0.77	1.00	—
School adjustment (11)	0.87	0.49	0.44	1.00
Problem behavior (8)	0.79	−0.42	−0.39	−0.43

Correlations significant at $P < 0.001$.

Table II. Gender and grade differences in school bonding, school adjustment and multiple problem behavior

Variables		<i>N</i>	Mean	(SD)	Statistic*
School bonding	males	1991	19.76	(3.14)	$T = 6.39$
	females	2098	20.38	(3.08)	
	6th	1312	21.23 ^a	(2.83)	$F = 156.05$
	7th	1398	19.84 ^b	(3.12)	
	8th	1414	19.23 ^c	(3.07)	
School climate	males	1990	40.04	(5.68)	$T = 5.69$
	females	2097	41.03	(5.43)	
	6th	1310	42.77 ^a	(5.08)	$F = 191.06$
	7th	1398	40.19 ^b	(5.40)	
	8th	1414	38.82 ^c	(5.50)	
School adjustment	males	2005	33.72	(6.60)	$T = 10.65$
	females	2121	35.84	(6.11)	
	6th	1333	35.67 ^a	(6.39)	$F = 20.87$
	7th	1406	34.66 ^b	(6.47)	
	8th	1424	34.11 ^c	(6.38)	
Problem behavior	males	2042	2.86	(3.16)	$T = 10.28$
	females	2125	1.89	(2.92)	
	6th	1364	0.82 ^a	(1.41)	$F = 114.83$
	7th	1409	1.29 ^b	(1.80)	
	8th	1430	1.86 ^c	(2.13)	

*All values significant ($P \leq 0.001$).

Grades with different superscripts are significantly different from one another ($P \leq 0.001$).

that promote student–school bonding may help prevent adolescent problem behavior.

Currently, we are implementing a problem behavior prevention project entitled *Going Places* that builds on the work of earlier primary prevention studies that have attempted to prevent problem behavior by increasing school bonding through skills training (Schinke *et al.*, 1991), parent education (Hawkins *et al.*, 1988) and environmental change (Gottfredson, 1986). The program is unique in applying multiple components over all 3 years of middle school. The curriculum, teacher, school

environment and parent program components are based on social development (Hirschi, 1969) and social learning (Bandura, 1986) theories and data from the baseline survey presented in this paper.

The curriculum consists of 18 class lessons offered in both the sixth and seventh grades, and nine lessons in the eighth grade. The objectives of the curricula are to (1) foster skills and social competence through skills training; (2) increase participation in classroom and school activities; (3) influence perceived social norms about academic achievement, school conduct and problem

behavior; and (4) increase school bonding. Problem solving, self-management and self-control skills, school involvement, communication, peer resistance, and conflict resolution are emphasized. A typical lesson begins with the objectives for the class and the introduction of a new skill, followed by a brief 'trigger' videotape (featuring local talent and locations) in which common problems are presented and problem solving approaches are modeled by the actors. The teacher then leads a brief analysis of the problem using the ICAN (Identify the problem, Consider the alternatives, Act carefully and Note the results) problem solving approach. Students then practice problem solving using a variety of skills through various interactive, group activities and role plays. Thus, the students obtain substantial practice, while the teacher provides constructive feedback.

Teacher training emphasizes *authoritative* classroom management techniques, including the establishment of high expectations for academic achievement and classroom behavior, and teacher support for student achievement. Teachers are encouraged to adopt interactive and cooperative learning methods and provide copious individual feedback.

The enhanced school environment component is based on social marketing and social change strategies to establish realistic, prosocial norms, establish a positive image for the school, reinforce student achievement, extend exposure to *Going Places* curriculum concepts and improve school climate. Strategies designed to promote school bonding by extending the lessons of the classroom to the larger school environment include the following: (1) an informational 'roll-out' to precede each unit; (2) posters and short video segments presented in the cafeteria and display areas; (3) travelers' checks awarded to students by a teacher for applying skills learned in a *Going Places* lesson; and (4) special activities, such as assemblies and a year-end field trip, which students earn the right to attend by completing their passport and earning travelers' checks. Strategies designed to improve school climate include the following: (1) teacher training in techniques for establishing an authorita-

tive classroom climate and (2) completion of the *School Climate Checklist* by school administrators. The *School Climate Checklist* is a self-assessment tool that addresses the following areas: student morale, teacher morale, discipline, school safety, and parent and community involvement. The idea is for administrators to identify areas in need of improvement at their school and develop strategies for improving climate.

The parent education component includes informational newsletters, involvement in curriculum-related homework, a 20-min instructional video, an informational booklet and newsletters. The video, booklet and newsletters are designed to teach parents how to supervise and monitor their children's behavior, be involved in their children's school activities, and establish appropriately high performance expectations. Parents are encouraged to provide warmth and support, while enforcing rules and involving children in the process of making decisions that affect their lives. Periodic newsletters are designed to update parents on *Going Places* activities, prompt them to remain actively involved with their children, and encourage them to review the booklet and video. Student homework assignments are designed to engage students and parents in interactive learning activities in which parents find out more about what students are learning in the curriculum and have opportunities to reinforce students social skills.

Conclusion

This paper has identified school bonding as a potential mediator of problem behavior. If schools compete successfully for students' affiliation, students may remain more committed to academic achievement, and be less likely to engage in problem behaviors in and out of school. Middle school is a particularly promising setting in which to address problem behavior. Schools can compete for students' affiliation by teaching social skills, improving classroom climate, modifying school environment, and enlisting active involvement and support by parents. Studies such as *Going Places* that test the utility of interventions designed to

increase student-school bonding may provide particularly valuable information about how middle schools can be altered to increase bonding, thereby improving academic achievement, reducing misbehavior and delaying or preventing the onset of problem behavior.

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